(19) World Intellectual Property Organization International Bureau

. I BRAK BRAKERA IN BRAKER KURIN BRAKER BRAKER

(43) International Publication Date 19 January 2006 (19.01.2006)

(10) International Publication Number WO 2006/006956 A2

- (51) International Patent Classification: C12N 15/82 (2006.01)
- (21) International Application Number:

PCT/US2005/003332

- (22) International Filing Date: 28 January 2005 (28.01.2005)
- (25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 60/541,142

2 February 2004 (02.02.2004) US

- (71) Applicants (for all designated States except US): E.I. DUPONT DE NEMOURS AND COMPANY [US/US]; 1007 Market Street, Wilmington, Delaware 19898 (US). PIONEER HYBRID INTERNATIONAL [US/US]; 800 Capital Square, 400 Locust Street, Des Moines, Iowa 50309 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): TARAMINO, Graziana [IT/US]; 12 Bedford Court, Wilmington,

Delaware 19805 (US). SAKI, Hajime [DE/US]; 31 Bridle Brook Lane, Newark, Delaware 19711 (US). MEELEY, Robert, B. [US/US]; 3214 Edwards Avenue, Des Moines, lowa 50312 (US). NIU, Xiaomu [CN/US]; 6473 N. Winwood Drive, Johnson, Iowa 50131 (US).

- (74) Agent: JOUNG, J., Kenneth; E. I. Du Pont de Nemours and Company, Legal Patent Records Center, 4417 Lancaster Pike, Wilmington, Delaware 19805 (US).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH,

[Continued on next page]

(54) Title: ALTERING ROOT STRUCTURE DURING PLANT DEVELOPMENT

			*** ********** ******** ******** ******
			+++++++++++++++++++++++++++++++++++++++
			SEC IP NO.9
SEQ	ΙĐ	NO: 6	MTGFGSPCGACKFLERKCVRGCVFAPYFCHEQGAAHFAAJHKVFGASNVSKLLAHL
SEQ	ID	NO: 5	HTGFGSPCGACKFLERKCVRCCVFAPYFCHEQGAAHFAAIHKVFGASHVSKLLAHL
SEQ	LE	NO: 30	MTGFGSPCGACKFLREKCVRGCVFAPYFCHEQGAAHFAAJHKVFGASNVSKLLAHL
SEO	ID	NO: 26	MTGEGSPCGACKFLRRKCVRGCVFAPYFCHEGGAAHFAAIHKVFGASNVSKLLANL
SEC	ID	NO: 27	MTSCSSSSGSFCGACKFLREKCAKGCVFAPYFCHEQGASHFAAIHKVFGASHASKILLSHL
_			THE CONSTRUCTION OF THE PROPERTY OF THE PROPER
			** *** ****** ****** ******
			***** *********************
			SEQ ID NO. 9
SEC	ΙĐ	NG: 6	PLADRAEAAVTISYEAQARLRDPIYGCVAHIFALQQQV
SEQ	ID	NO: 8	PLADRPEAAVTISYEAQARLRDFIYGCVAHIFALOOOU
SEQ	10	NO:30	PLADRAERAVTISYEAGRALPOPTYGCVARIFALOGOV
SEQ	ΙĐ	NO:26	PLADRFEAAVTISYEAQAKLRDPIYGCVAHIFALQQQV RIVHSIDVSLVGVAGLLILVSR
SEQ	10	HO: 27	PISDRCEARITISYEAGARLODETYGCVSHIFALQCOV
			*** * *** ***
*			++++++++++++++++++++++++++++++++++++++
			SEQ 10 NO:9 SEG 10 NO:10
SEQ	10	NO: 6	MTLOAQLASLFAQAAQQOQGVHEDAKG-YVGSAAAE DLGYC-Y-FRES
SEQ	11.	NO:8	MTLDAGLASLKAAAACG-IHHODVGATTKGGYMSAAATAADD DLGYGGYNOWCG
SEQ	ΙÞ	MO:30	MILDAOLACLKADAACGCOGVHEDAKG-YVGSAAAE CLGYG-Y-PWCG
SEQ	H	NO:26	RVFEQVHTIJAQLASLKAAAAQG-18HQDVG#TTEGGYMSAAATAADD QLGYGGYNOWCG
SEQ	ΙĐ	NO:27	VNLQAELEILKQQAAQSHIFADSPTSENPNSTYGDTTKAPYH HDHQNIYHHHDQ
			• •
			+++ + ++
			SEO ID NO:10 SEO ID NO:11
		NO: 6	GNGGAAAAA GAVGAPAAOPGAYCNGAHESLTALLGS- SDYMOQSLYHAFEO
		8:04	SNGGGAPAA SOPGAYSSNGGAGHGHDSITALLAAG SDYMGHSLYHAFEH SEG
		HO: 30	GNGGARARA AGAVGAPARQPGAYCNGAHESLTALLGS- SDYMQQSLYHAFEQ
		NO:26	SNGGGAPAR SOPGRYSSNGGAGHGHDSITALLAAG SDYKCHSLYHAFEH SEG
SEQ	10	NO:27	THLVYOTGS SGTVQHGDATESSYHNETSSGMG

			+++ ++ +++++++++++++++++++++++++++++++
			SEC 10 NO. 13
	3 D	NO: 6	AGADDDDGROGY GFEAAAESSSLG AEESGWRASS-GYODGEDLOSVAYAYLN
HR	10		ACHVOLOUS A DEPARTMENT AND A DEPARTMENT
	110	NO: 6	AGRANDOHARAR REERABESSS COMRASER EDESYMBSSSSGYONCHOLOSVAYRYLD
R-	٠.		
_	TD	NO: 30	AGADDDDGRQGY AFEAAAESSSLG AEESGWRSSS-GYODCEDLQGVAYAYLN
ar			
SEQ	JT)	NO:26	AGAVDDGHAAAA AFEAAAESSS OGMARSFA ADESVWRSSSSGYODCEDLQSVAYAYLN

(57) Abstract: Isolated nucleic acid fragments and recombinant constructs comprising such fragments for altering root structure during plant development are disclosed along with methods of root structure alteration during plant development.



GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, Cl, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

 without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.